KATKOV, V. F. (Aspirant)

"An Investigation of the Process of Deep-Drawing Complex Pieces." Moxcow Aviation Technological Inst, 10 Dec 54. (VM, 1 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)

SO: SUM No. 556, 24 Jun 55

GORBUNOV, M.N., POPOV, O.V., KATKOV, V.F., Cand. of Tech. Sci.

"The Deep Drawing of Sheet Metal With the Use of Heating", from the Monograph Investigations on the Deep Drawing of Metals, No 29, Moscow Aviation Technological Institute, Oborongiz, Moscow, 1956, 143 pages

Sum. 1287

KATKOV, V.F. (Cand. of Tech. Sci.)

"Investigating the Process of Deep Drawing Products Having a Complex Shape", from the monograph Investigations on the Deep Drawing of Metals, No 29, Moscow Aviation Technological Institute, Oborongiz, Moscow, 1956, 145 pages

Sum. 1287

GORBUNOV, M.N., kandidat tekhnicheskikh nauk, dotsent; POPOV, O.V., kandidat tekhnicheskikh nauk; KATKOV, V.F., kandidat tekhnicheskikh nauk.

Preheated deep drawing of sheet metals. Trudy MATI no.29:5-27 '56.
(Deep drawing (Metalwork)) (MLRA 9:12)

KATKOV, V.F., kandidat tekhnicheskikh nauk.

Investigation of processes used in the deep drawing of articles of intricate shape. Trudy MATI no.29:77-105 '56. (MLRA 9:12)
(Deep drawing (Metalwork))

KATKOV, V.F.

POPOV, O.V., kandidat tekhnicheskikh nauk; GORBUNOV, M.N., kandidat tekhnicheskikh nauk; KATKOV, V.F., kandidat tekhnicheskikh nauk.

Deep drawing of hollow objects with preheating. [Izd.] LONITOMASH vol.40:97-113 '56. (MLRA 10:4)
(Deep drawing (Metalwork))

25(1) PHASE I BOOK EXPLOITATION SOV/2944

Gubkin, Sergey Ivanovich (Deceased), Mikhail Vasil'yevich Storozhev, Boris Pavlovich Zvorono, Vasiliy Fedorovich Katkov, Ilariy Anatol'yevich Noritsyn, Yevgeniy Aleksandrovich Popov, Georgiy Aleksandrovich Smirnov-Alyayev, Aleksandr Dmitriyevich Tomlenov, Yevgeniy Pavlovich Unksov, and Leopol'd Adol'fovich Shofman

Osnovy teorii obrabotki metallov davleniyem (Fundamentals of the Theory of Metal Forming) Moscow, Mashgiz, 1959. 538 p. Errata slip inserted. 7,500 copies printed.

Ed.: M. V. Storozhev; Ed. of Publishing House: A. I. Sirotin, Engineer; Tech. Ed.: B. I. Model'; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): S. Ya. Golovin, Engineer.

PURPOSE: This book is intended for engineers and scientific workers studying the theoretical problems of metal forming.

COVERAGE: This collective work purportedly reflects the contemporary trends in the development of the metal-forming theory. Emphasis is given to methods of calculating forces and deformations.

Card 1/11

KOTKOV V. T.

PHASE I BOOK EXPLOITATION SOV/5013

Akademiya nauk SSSR. Institut mashinovedeniya

Issledovaniya v oblasti obrabotki metallov davleniyem (Investigations in the Field of Metal Pressworking) Moscow, Izd-vo AN SSSR, 1960. 66 p. Errata slip inserted. 4,200 copies printed.

Resp. Ed.: A.D.Tomlenov; Ed. Of Publishing House: G.Ye. Pevzner; Tech. Ed.: S.P. Golub'.

PURPOSE: This collection of articles is intended for engineers, designers, and scientific research workers engaged in the plastic working of metals.

COVERAGE: Articles of the collection deal with the following problems: tensile stresses in metal during forging and cross-rolling; deformation of a membrane in bulging by hydraulic pressure; intensification of plastic deformation in stamping; contact area under the state of stress in helical cross-rolling on a three-roll mill; testing of sheet steel for biaxial tension by the method of bulging a membrane under hydraulic pressure; deformability of sheet steel; determination of the quality of industrial lubricants used in the cold stamping of sheet steel;

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Tension by the Method of Bulging [a Membrane] Under Hydraulic Pressure 38

Card 2/3

ACC NR: AT6035123 (A,N) SOURCE CODE: UR/2536/66/000/065/0146/0175

AUTHOR: Katov, V. F. (Candidate of technical sciences)

ORG: Aviation Technological Institute, Moscow (Aviatsionnyy tekhnologicheskiy institut)

TITLE: The problem of finding stampability indicators based on mechanical test results

SOURCE: Moscow. Aviatsionnyy tekhnologicheskiy institut. Trudy, no. 65, 1966. Novoye v tekhnologii shtampovki (Recent developments in stamping technology), 146-175

TOPIC TAGS: metal stamping, mechanical property, tensile property, tensile strength, ductile material, plastic deformation, cutting force, bending angle, flange test

ABSTRACT: Tensile tests were used as the basis of predicting stampability during cutting and biaxial forming operations. Sixteen different materials were tested and the following mechanical property indicators were tabulated: 0.2% yield stress, ultimate strength, fracture stress, uniform elongation and ductility, and local elongation and ductility. True stress-strain curves are shown and the distribution of local relative elongation across the length of a fractured sample is given. Equations show how the final elongation is related to the sum of local relative elongations. A universal material parameter K_L was derived and its variation as a function of sample length is given. Cutting tests were also done on the same materials and the results were related

Card 1/2 UDC: 620.162.2.001.2

ACC NR: AT6035123

to the tensile test. The cutting resistance (σ_{av}) given as a function of tool embedment had elastic, plastic, and fracture stages--similar to tensile curves. For a constant cutting edge, σ_{av} was given as a function of relative gap displacement for cutting speeds of 4 and 60 mm/min. With changes in relative gap displacement from 6.13 to 18.4% the value of σ_{av} remained constant, although it varied with material; for 1Kh18N9T, σ_{av} was 62 kg/mm^2 at 4 mm/min and about 70 at 60 mm/min, while it was as low as 10 kg/mm^2 for some aluminum alloys. At a constant cutting speed, the ratio of cutting resistance to yield strength, or to true cutting resistance, was relatively constant for any material. A stress analysis of the cutting process based on slip line theory was made. Bend testing was also done. Minimum bending radii were tabulated for all of the materials at bend angles of 60 and 120°. A method was described for calculating the minimum bend radius for any thickness of a material. The springback angle is given as a function of relative bend radius. Limiting flange coefficients were correlated with the relative elongations. The limiting flange coefficient is given as a function of the relative edge radius of a die and the test data are collated into a nomogram. Orig, art. has: 27 figures, 6 tables, 15 formulas.

SUB CODE: 13,11/ SUBM DATE: none/ ORIG REF: 003

Card 2/2

POPOV, G.G.; PERCHIKHINA, Ye.A.; KATKOV, V.G.; BOGDANCHENKO, A.G.; TERLETSKIY, A.A.; KAGANOV, V.M.; SMAGINA, Ye.I.; KUTSEV, V.S.

Exchange of experience. Zav.lab. 28 no.4:509-511 '62. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta (for Popov, Perchikhina). 2. Institut fizicheskoy khimii AN SSSR (for Katkov). 3. Zavod "Dneprospetsstal'" (for Bogdanchenko, Terletskiy). 4. Karagandinskiy metallurgicheskiy zavod (for Kaganov). 5. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti (for Smagina, Kutsev).

(Testing machines)

S/138/60/000/01/03/010

AUTHORS: Sakhnovskiy, N.L., Yevstratov, V.F., Smirnova, L.A., Katkov, V.I.

TITLE: Rating of Wear Resistance of Tread Rubbers in Operation Tests of Tires

PERIODICAL: Kauchuk i Rezina, 1960, No. 1, pp. 10 - 15

TEXT: With the highly resistant cord being produced at present the wear of the tread in a tire is the basic reason for the eventual failure of a tire. Great importance is therefore being attached to the method of rating the wear resistance of rubber compounds. In this connection the article offers certain recommendations, which are based on the investigations conducted by NIIShP (Scientific Research Institute of the Tire Industry) during the last 3 years. Ordinary road tests are not sufficiently reliable for rating, due to the fact that they cover too wide a range of results, depending upon the conditions under which these road tests have been performed, such as kind and condition of roads, type of automobile, speed, load, position of tire, season, climatic condition, weather etc. A wet road, for instance, is liable to reduce wear of a tire 12 times. More reliable results can be obtained, if a batch of standard and experimental tires are tested simultaneously in one

Card 1/3

Rating of Wear Resistance of Tread Rubbers in Operation Tests of Tires

meter pool. Under these circumstances a formula for calculating the relative wear resistance can be used which is given in the article. A method of changing the tires from front to rear and vice versa has been developed abroad. Another method consists in testing experimental and standard tires under stricly identical conditions within a comparatively short period of time thus reducing the range of results and obtaining a fairly accurate account of the wear resistance of tread rubbers. The article cites three means of measuring wear of tread, viz. by measuring the depth of groves, using depth gage, by weighing the tire and by using radioactive isotopes. A special depth gage has been developed by V.V.Nikitin. Buist [Ref. 2] claims that the intensity of wear in the tread of a tire is not constant, but greater in the beginning of the test than subsequently. Thus it was found that intensity of wear of a tire on a passenger car becomes constant only after 500 kilometers of driving. Tests carried out with a Pobeda automobile have confirmed these findings. The intensity of wear and the amount of wear are expressed in 2 graphs shown in the article. Another graph shows the curve representing the run of a 260-20 tire, covering 40,000 km as calculated on the basis of the first measuring of wear. The method of performing road tests with standard tires

S/138/60/000/01/03/010

Rating of Wear Resistance of Tread Rubbers in Operation Tests of Tires

is explained in the article as well as the formula which permits to calculate the relative average wear resistance of the tread. The method recommended for carrying out road tests for rating wear resistance permits results to be obtained in a comparatively short period of time (after about 8-12 thousand km) by reducing the range of results 2-3 times as compared with results of ordinary road tests. There are 6 tables, 4 graphs, 3 diagrams and 10 references: 2 Soviet, 6 English and 2 French.

ASSOCIATION: NIIShP (Scientific Research Institute of the Tire Industry)

Card 3/3

KUDRYAVTSEV, S.N.; KATKOV, V.I.

Adopting the 115M centrifugal pug mills in the manufacture of dinas bricks. Ogneupory 31 no.1:14-17 '66.

(MIRA 19:1)

1. Pervoural'skiy dinasovyy zavod.

S/138/61/000/003/002/006
A051/A129

AUTHORS: Buyko, G. N.; Sakhnovskiy, N. L.; Yevstratov, V. F.; Smirnova, L. A.; Levitina, G. A., and Katkov, V. I.

TITLE: Certain features of carboxyl-containing butadiene-styrene SKS-30-1 rubber and its evaluation in tread rubbers

PERIODICAL: Kauchuk i rezina, no. 3, 1961, 9-15

TEXT: The results of an investigation are given, which was conducted to develop a formulation and conditions for manufacturing wear-resistant tread rubber based on carboxyl containing butadiene-styrene СКС-30-1 (SKS-30-1) rubber. The results of an evaluation of the properties of rubbers and tires using treads based on the above-mentioned rubber are given. In developing the formulation of the tire tread rubber baded on SKS-30-1 the best fillers were found to be the active furnace ХАФ (KhAF)-type carbon blacks. The extract of phenol purification (ПН-6, PN-6), 10 w.p., was the best softener used in the amount of 45 w.p. of the KhAF carbon black (Vulkan 3) and ensuring a plasticity of the mixture according to Carriere of about 0.50. Magnesium oxide was chosen as the main vulcanizing agent based on work of

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the VNIISK (Dolgoplosk, B. A., et al.- Ref. 1: Kauchuk i rezina, no. 3, 11, 1957; Ref. 2: Kauchuk i rezina, no. 6, 1, 1957). The vulcanizing group contained also thiuram and zinc oxide. The following vulcanizing group was selected (in w.p.): MgO-2.0, ZnO -1.0, sulfur-0.8, thiuram - 1.0. The tire tread mixtures based on SKS-30-1 were prepared according to a double-stage process. It was noted that scorching depends to a great extent on the meteorological conditions during the period of the mixture preparation. It is assumed that the main reason for the scorching tendency of the SKS-30-1 mixtures in the fall and spring is apparently due to an elevated moisture content in the ingredients. It was shown that water has a significant effect on the scorching of the SKS-30-1 mixtures. The effect of the water increases with the content of metal oxides in the mixtures. The highly significant effect of small quantities of water on the scorching of SKS-30-1 mixtures containing metal oxides is explained by the fact that when water is added to the various micro-sections of the mixtures a polar medium is formed facilitating the interaction between the polymer acid and the metal oxides at comparatively low temperatures. A simple method for the removal of water is given, viz., the mechanical treatment of the mixtures at elevated temperatures over long periods of time. Experiments showed that when storing the

Main features of...

Mixtures for a period of ten days no noticeable increase in the moisture content or a tendency to scorching is observed (Fig. 4). The properties of the SKS-30-1 based rubber are compared to that of SKS-30ARKM and NR. The outstanding feature of the SKS-30-1 based rubber is said to be the combination of a high static modulus with a high relative elongation. It has superior resistance to thermal aging and its main advantage over the other two types is its extremely high resistance to crack growth in repeated bending. One of its disadvantages is its comparatively low temperature-resistance manifesting itself in a significant drop of the tensile strength at high temperatures. However, the latter property improves noticeably during the aging process contrary to SKS-30ARKM and NR based rubbers. The tensility properties of the SKS-30-1-based rubber during the rolling process improved as opposed to the other types. The difference between SKS-30-1 rubber on one hand and NR and SKS-30ARKM rubbers on the other is noted in the dependence of the heat-resistance coefficient in tear-resistance on the roada bility of the tires in stationary tests (Fig. 6). As to its hysteresis properties the SKS-30-1 rubber resembles the rubbers based on butadiene-styrene and is much inferior to NR. Data on experimental procedures showed that non-filled SKS-30-1 rubber contrary to SKS-30ARKM and NR rubber has a high wear- resistance

Card 3/5

Certain features of...

under certain conditions. Tests of the tire tread rubber based on three types were performed on the ИИЧ-3 (IMI-3) instrument and showed no significant differences in their wear-resistance. The dependence of the wear-resistance (in SKS-30-1 rubber) on the medium where the test is conducted is expressed to a lesser degree. This indicates a lesser intensity of the oxidation processes taking place in it during wear of the SKS-30-1 rubber as compared to the other varieties. The wear of SKS-30-1 rubber on a metallic grooved surface is much less. The results of service tests for both cars and trucks showed that tread rubber based on SKS-30-1 material exceeds the other materials in its wear-resistance, e. g., that of SKS-30ARKM and SKS-30AM. Tire treads based on SKS-30-1 rubber were tested on the road and under stationary conditions. The first batch of the truck and automobile tires were damaged completely owing to a breakdown of the protector joint after a 5 - 15 thousand km run. It is recommended removing the upper scorched layer of the joint when producing SKS-30-1 treads. The relationship of the joint stability in SKS-30-1 treads to the type of adhesive layer shows: 1) that adhesives based on NR sharply decrease the stability of the joint; 2) the adhesives based on BSK ensure a higher stability of the joints, 3) the greatest joint stability is obtained when using stable adhesives based on SKS-30-1.

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Main features of...

One of the disadvantages of SKS-30-1 tires is said to be the lowered stability of the adhesion between the tread and the breaker based on NR. One of the outstanding features of the SKS-30-1 tire treads as compared to other types, such as butadiene-styrene rubber is the absence of tire damage due to a defect by cracking along the grooves of the tread. The authors conclude that the carboxyl-containing rubbers are promising for use in tread rubber for the automobile industry. There are 6 tables, 6 graphs, 1 photograph and 4 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institue of the Tire Industry)

KATKOV,V.L. (Novosibirsk)

"Invariant-group solutions of equations of breeze and monsoon"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

KATKOV, V.L.

Invariant-group solutions of breeze and monsoon equations. Meteor. i gidrol. no.10:11-13 O '64. (MIRA 17:10)

1. Vychislitel'nyy tsentr Sibirskogo otdeleniya AN SSSR.

KATKOV, V.L.

One class of exact solutions of the equation for forecasting geopotential. Izv. AN SSSR. Fiz. atm. i okeana 1 no.10:1088-1090 O '65. (MIRA 18:10)

1. Vychislitel'nyy tsentr Sibirskogo otdeleniya AN SSSR.

KATKOV, V.L.

Self-similar solutions of a problem on local wind. Izv. AN SSSR. Fiz. atm. i okeana 1 no.2:224-226 F '65. (MIRA 18:5)

1. Vychislitel'nyy tsentr Sibirskogo otdeleniya AN SSSR.

KATKOV, V.L.

Solution of problems of mesometeorology by the numerical method. Meteor. i gidrol. no.7:32-37 Jl '65. (MIRA 18:6)

1. Vychislitel'nyy tsentr Sibirskogo otdeleniya AN SSSR, Novosibirsk.

KATKOV, V.I.

An improvement in matrix factorization. Sib. mat. zhur. 6 no.3:697-699 My-Je '65. (MIRA 18:8)

CHUGUNOV, Yu.D.; FLINT, V.Ye.; MAL'TSEV, M.I.; KATKOV, V.M.; SIDOROV, N.F.

Experiment in mapping the habitat of the greater gerbil within the foci of cutaneous leishmaniasis in southern Turkmenistan. Vop.kraev.paraz.Turk.SSR 3:157-160 '62. (MIRA 16:4)

1. Institut epidemiologii i mikrobiologii imeni N.F.Gamaleya, Moskva i Okruzhnoy gospital' pogranichnykh voysk Turkmenskogo okruga.

(TURKMENISTAN--GERBILS AS CARRIERS OF DISEASE)
(TURKMENISTAN--DELHI BOIL)

KATKOV, V.M.

Effectiveness of some preventive measure in the control of cutaneous leishmaniasis. Zdrav.Turk. 7 no.1:33-35 Ja '63.
(MIRA 16:3)

(DELHI BOIL)

BELOVA, Ye.M.; KATKOV, V.M.

Report on the Scientific Conference on Leishmaniasis. Vop. kraev.paraz.Turk.SSR 3:291-293 '62. (MIRA 16:4)
(LEISHMANIASIS--CONGRESSES)

SAF'YANOVA, V.M.; KATKOV, V.M.

Network canopy saturated with a repellent as a protective means against sand fly attacks. Zdrav. Turk. 8 no.2:36-39 F'64
(MIRA 17:4)

MAL'TSEV, M.I.; KATKOV, V.M.; ACHILOV, R.

Results of testing some repellents under natural conditions in Turkmenistan. Med. paraz. i paraz. bol. 33 no.5:613-614 S-O '64. (MIRA 18:4)

L 37086-66 EWT(m) IJP(c)

ACC NR: AP6016810 SOURCE CODE: UR/0367/66/003/001/0081/0088

45
B

AUTHORS: Bayer, V. N.; Katkov, V. M.

ORG: Novosibirsk State University (Novosibirskiy gosudarstvennyy universitet)

TITLE: Quantum depolarization of electrons in a magnetic field

SOURCE: Yadernaya fizika v. 3, no. 1, 1966, 81-88

TOPIC TAGS: depolarization, electron polarization, quantum resonance phenomenon, transverse magnetic field, circular accelerator

ABSTRACT: Theoretical calculation are presented to show that the polarization acquired by electrons and positrons in storage rings may be lost not through depolarizing resonances due to the radial and azimuthal components of the magnetic field on the particle trajectory, but also because of the quantum character of the radiation. Quantum depolarization, like resonance depolarization, also occurs in the presence of perturbing radial and azimuthal magnetic field components, but fulfillment of the resonance conditions is not essential in the quantum case. The resonance required for quantum depolarization is produced by the Fourier components of the energy jumps connected with the quantum character of the radiation. Although quantum depolarization, unlike resonance depolarization, cannot be suppressed by suitable choice of the particle energy, it can be reduced by minimizing the magnetic-field perturbations. Estimates for typical storage ring parameters show that a 6 Bev storage ring with field

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Card 2/2

Method of measuring the fast-neutron multiplication factor in uranium-water lattices. G. A. Stolyarov, L. V. K[illegible], V. F. [illegible] and Yu. V. Nikol'skii. [illegible] 1955 [illegible]

[illegible] Measurements [illegible] for a [illegible] lattice of 34 × 34 × 60 cc. (cylindric blocks of U, ordinary H_2O) in a U-graphite reactor and for experimental U-H_2O reactors. The measurements agree well with each other. The following formula is valid $\mu = 1 + [N_{238}(\nu_{238} - 1 - (\Sigma_c/\Sigma_f))]/N_{235}\nu_{235}$, where N_{238}/N_{235} is the ratio of the fission nos. for the nuclei U^{238} and U^{235} and ν_{238} and ν_{235} are the nos. of fast neutrons arising in the fission of the nuclei U^{238} and U^{235}, resp. Σ_c/Σ_f is the mean ratio of radiation capture and fission cross sections for U^{238}. Two methods for detg. N_{238}/N_{235} are presented. In one method fragments are collected on paper disks, in the other method an ionization chamber is used for counting of the fragments. In both methods layers of natural U and U poor in U^{235} are used, which are placed in a slot of the U of the lattice, and the β activities are compared. Werner Jacobson

Category : USSR/Nuclear Physics - Nuclear Reactions C-5

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 558

Author : Katkov, V.P., Nikol'skiy, Yu.V., and Stolyarov, G.A.
Title : Determination of the Ratio of the Average Fission Cross Sections of Pu^{239} and U^{235} in Uranium-Water Lattice Blocks

Orig Pub : Atom. energiya, 1956, No 3, 61-64

Abstract : The ratio of the average fission cross sections of Pu^{239} and U^{235} was determined in uranium-water lattices of natural uranium and ordinary water. For the sake of comparison, this ratio was measured for a uranium-graphite reactor. It is established that the ratio $\sigma_{Pu}^{f}/\sigma_{U}^{f}$ for uranium-water lattices with a spacing of 45, 50, 55, and 60 mm, and for uranium-graphite reactor with a lattice spacing of 200 mm are equal to 2.24, 1.99, 1.88 and 1.79 respectively.

Card : 1/1

KATKOV, V.P.

21(4) PHASE I BOOK EXPLOITATION SOV/2583

International Conference on the Peaceful Uses of Atomic Engergy. 2nd, Geneva, 1958.

Doklady sovetskikh uchenykh; yadernyye reaktory i yadernaya energetika. (Reports of Soviet Scientists; Nuclear Reactors and Nuclear Power) Moscow, Atomizdat, 1959. 707 p. (Series: Its: Trudy, vol. 2) Errata slip inserted. 8,000 copies printed.

General Eds.: N.A. Dollezhal, Corresponding Member, USSR Academy of Sciences, A.K. Krasin, Doctor of Physical and Mathematical Sciences, A.I. Leypunskiy, Member, Ukrainian SSR Academy of Sciences, I.I. Novikov, Corresponding Member, USSR Academy of Sciences, and V.S. Fursov, Doctor of Physical and Mathematical Sciences; Ed.: A.P. Alyab'yev; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This book is intended for scientists and engineers engaged in reactor designing, as well as for professors and students of higher technical schools where reactor design is taught.

COVERAGE: This is the second volume of a six-volume collection on the peaceful use of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy, held from September 1 to 13, 1958 in Geneva. Volume 2 consists of three parts. The first is devoted to atomic power plants under construction in the Soviet Union; the second to experimental and research reactors, the experiments carried out on them, and the work to improve them; and the third, which is predominantly theoretical, to problems of nuclear reactor physics and construction engineering. Yu. I. Koryakin is the science editor of this volume. See SOV/2081 for titles of all volumes of the set. References appear at the end of the articles.

PART II. EXPERIMENTAL AND RESEARCH REACTORS

PART III. PHYSICS AND ENGINEERING OF REACTOR DESIGN

GORDONOV, D.I.; KATKOV, V.P.

Automation of the processing of aerogeophysical measurements. Geofiz. prib. no.20:99-103 '64. (MIRA 18:9)

1. Osoboye konstruktorskoye byuro Gosudarstvennogo geologicheskogo komiteta SSSR.

GEVORGYAN, B.A.; KATSMAN, Yu.V.; LIMONOV, G.Ye.; SAMKOV, V.S.; KATKOV, V.P.; VINOGRADOVA, L.V.; MAMYKINA, A.D.; POPOV, G.I.; DOROKHOV, A.A.; FALEYEV, G.A., inzh., retsenzent; BOGATAYA, L.M., red.; ZARSHCHIKOVA, L.N., tekhn. red.

[Press method for meat boning and deveining] Obvalka i zhilovka miasa pressovaniem. [By] B.A.Gevorgian i dr. Moskva, Pishchepromizdat, 1963. 31 p. (MIRA 16:8)
(Meat industry--Equipment and supplies) (Sausages)

MATROV, Ye.A.

Geographical research in the Republic. Vest. AN Kazakh. SSR 17
no. 2:93-94 F '61. (MIRA 14:2)
(Kazakhstan--Geographical research)

6(4); 7(7) PHASE I BOOK EXPLOITATION SOV/3302

Katkov, Yevgeniy Aleksandrovich and Georgiy Sergeyevich Kromin

Osnovy radiolokatsionnoy tekhniki. Ch. II: Elementy i sistemy radiolokatsionnykh stantsiy (Fundamentals of Radar Engineering. Pt. 2: Elements and Systems of Radar) Moscow, Voyen. izd-vo M-va obor. SSSR, 1959. 477 p. No. of copies printed not given.

Ed.: M.V. Krylov, Engineer-Lieutenant-Colonel; Tech. Ed.: M.A. Strel'nikova.

PURPOSE: This is a textbook for use in the training of radio specialists of army radio-engineering units. It may also be used for the study of radar by persons with a secondary school education.

COVERAGE: The authors present the principles of construction and operation of the basic units of radar. They describe several types of existing radar units and assemblies, all of them taken from non-Soviet sources. Principal attention is devoted to

Card 1/12

KROMIN, Georgiy Semenovich; KATKOV, Yevgeniy Aleksandrovich; KARUS', A.P., inzhener-mayor, redaktor; SOKOKIN, V.V., tekhnicheskiy redaktor

[Principles of radar] Osnovy radiolokatsionnoi tekhniki. Moskva, Voen.izd-vo Ministerstva obor. SSSR. Pt.1. [Electronics] Elektroradiotekhnika. 1956. 463 p. (MLRA 9:8)
(Electronics) (Radar)

KATKOV, Ye.A.

Works on a geographical study of Kazakhstan. Vest.AN Kazakh.SSR 17 no.4:97-98 Ap '61. (MIRA 14:5)
(Kazakhstan—Geographical research)

KATKOV, Yu. A.: Master Tech Sci (diss) -- "The problem of processing chloride sublimates". Alma-Ata, 1958. 17 pp (Acad Sci Kazakh USSR, Inst of Metallurgy and Dressing), 200 copies (KL, No 5, 1959, 150)

KATKOV Yu. A.
P. 2

18(5,6,3) PHASE I BOOK EXPLOITATION SOV/2094

Akademiya nauk Kazakhskoy SSR. Institut metallurgii i obogashcheniya

Trudy, t. 1 (Transactions of the Institute of Metallurgy and Ore Dressing, Kazakh SSR Academy of Sciences, Vol 1) Alma-Ata, Izd-vo AN Kazakhskoy SSR, 1959. 159 p. 1,225 copies printed.

Ed.: Yu. N. Kuznetsov; Tech. Ed.: Z.P. Rorokina; Editorial Board: V.D. Ponomarev (Resp. Ed.), B.N. Lebedev, A.N. Grigorovich, L.P. Ni, R.A. Isokova, I.R. Polyvyannyy (Resp. Secretary), and Ye. I. Ponomareva.

PURPOSE: This book is intended for metallurgists and metallurgical engineers.

COVERAGE: This is a collection of articles dealing with various aspects of process metallurgy, principally nonferrous, and with related matters such as treatment of ore concentrates,

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properties of slags, etc. Topics discussed include precipitation of copper from slags, extraction of arsenic from speiss, recovery of rare metals from smelting dust, electrolytic precipitation of lead and zinc, and drying of lead-zinc concentrates. Three articles are concerned with the metal, rhenium. The articles are accompanied by Soviet and non-Soviet references.

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AVAILABLE: Library of Congress

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KATKOV, Yu.A.

Solubility of lead chloride in chloride solutions. Report No.1. Trudy Inst.met. i obogoshch. 1:14-26 '59. (MIRA 12:5)
(Lead chloride) (Solubility)

KATKOV, Yu.A.

Solubility of lead chloride in chloride solutions. Report No. 2: Effect of zinc chloride on the solubility of lead chloride in salt solutions. Trudy Inst.met. i obogashch. 1:27-30 '59. (MIRA 12:5)
(Zinc chloride) (Lead chloride) (Solubility)

KATKOV, Yu.A.; LEBEDEV, B.N.

Effect of cation properties on the stability of complex compounds of lead in chloride solutions. Trudy Inst. met. i obogashch. AN Kazakh. SSR 2:92-102 '60. (MIRA 13:10)
(Lead--Electrometallurgy)
(Lead--Compounds)

MACHKASOV, Ye.[illegible]; ZAZUBIN, A.I.; KATKOV, Yu.A.; SPIVAK, Yu.M.

Enlarged plant for the drying, hardening, and roasting of raw materials in a fluidized bed. Trudy Inst. met. i obog. AN Kazakh. SSR 5:130-140 '62. (MIRA 15:11)
(Fluidization)

ZAZUBIN, A.I.; KATKOV, Yu.A.

Interaction of phenacite with calcium carbonate during sintering.
Trudy Inst. met. i obog. AN Kazakh. SSR 12:109-119 '65.
(MIRA 18:10)

KATKOV, Yu.A.; STEPURA, V.G.; ZAZUBIN, A.I.; PONOMAREV, V.D.

Decomposition of phenacite by sulfuric acid at atmospheric pressures. Report No.2. Trudy Inst. met. i obog. AN Kazakh. SSR 1 :36-40 '65. (MIRA 18:10)

ZAZUBIN, A.I.; KATKOV, Yu.A.; PONOMAREV, V.D.

Rate of decomposition of phenacite in sulfuric acid. Trudy Inst. met. i obog. AN Kazakh. SSR 14:24-35 '65. (MIRA 18:10)

KATKOV, Yu.D.; PODCHESOV, E.N.; STROYNOVSKIY, V.V.; ZOZULYA, S.Ya.; mashinist-instruktor; KURAPOV, V.P., mashinist; BOGDANOV, V.I., mashinist; PORTYANKO, V.G., mashinist.

One more circuit for the antislippage protection of VL23 electric locomotives. Elek. i tepl. tiaga 4 no.11:19-21 N '60. (MIRA 13:12)

1. Mashinist-instruktor lokomotivnogo depo "Oktyabr'" Yuzhnoy dorogi (for Katkov). 2. Nachal'nik slushby lokomotivnogo khozyaystva Yuzhnoy dorogi (for Podchesov). 3. Glavnyy inzhener depo "Oktyabr'" Yuzhnoy dorogi (for Stroynovskiy).
(Electric locomotives)

LEMESHCHENKO, S.D., slesar'-avtomatchik; KHORUNZHIY, I.P., master;
KATKOV, Yu.D., mashinist-instruktor

Antiskid device for ChS1 and ChS3 electric locomotives. Elek. i tepl.tiaga 6 no.2:15-16 F '62. (MIRA 15:2)

1. Depo "Oktyabr'" Yuzhnoy dorogi (for Lemeshchenko). 2. Avtomatnyy tsekh depo "Oktyabr'" Yuzhnoy dorogi (for Khorunzhiy).

(Electric locomotives)

S/129/60/000/009/004/009
E193/E483

AUTHORS: Gorelik, S.S., Candidate of Technical Sciences, Faynbron, S.M., Katkova, A.M. and Shelgayeva, L.V., Engineers

TITLE: Causes of the Formation of Cracks During the Forging of Bars

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, No.9, pp.17-19

TEXT: The object of the investigation, described in the present paper, was to study the effect of the cast structure of the alloy EI437B on its hot workability. To this end, cylindrical specimens, 10 mm in diameter and 20 mm high, were cut from both the outer columnar crystals and the inner equiaxial grains' zones of the ingot, the axes of the specimens being parallel to the ingot axis and normal to the axes of the columnar grains. The specimens were then subjected to various degrees of plastic deformation at room and elevated (950 to 1050°C) temperatures, an Amsler drop-hammer having been used for this purpose. In contrast to specimens consisting of equiaxial grains, those cut from the columnar crystals' zone did not deform uniformly, as

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indicated by the change of the shape of their cross-section from circular to elliptical. This effect was found to be due to the columnar crystals being more ductile in the direction of their longer axes, the degree of anisotropy of plastic deformation increasing with rising temperature and increasing degree of deformation. The anisotropy of plastic deformation, attributed to the difference in ductility of the interior of the columnar crystals and grain-boundary layers, caused the formation of cracks during hot rolling of material with traces of columnar structure. Although the harmful effects of the presence of columnar grains in alloy EI437B can be minimized by strict control of the forging temperature and degree of deformation, it was concluded that even a small proportion of columnar grains in this alloy renders it unsuitable for critical applications or for manufacture of forged articles of complex shape. There are 2 figures and 2 Soviet references.

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KATKOVA, D.YE

Sverdlovsk, Ya.A.

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PHASE I BOOK EXPLOITATION SOV/6181

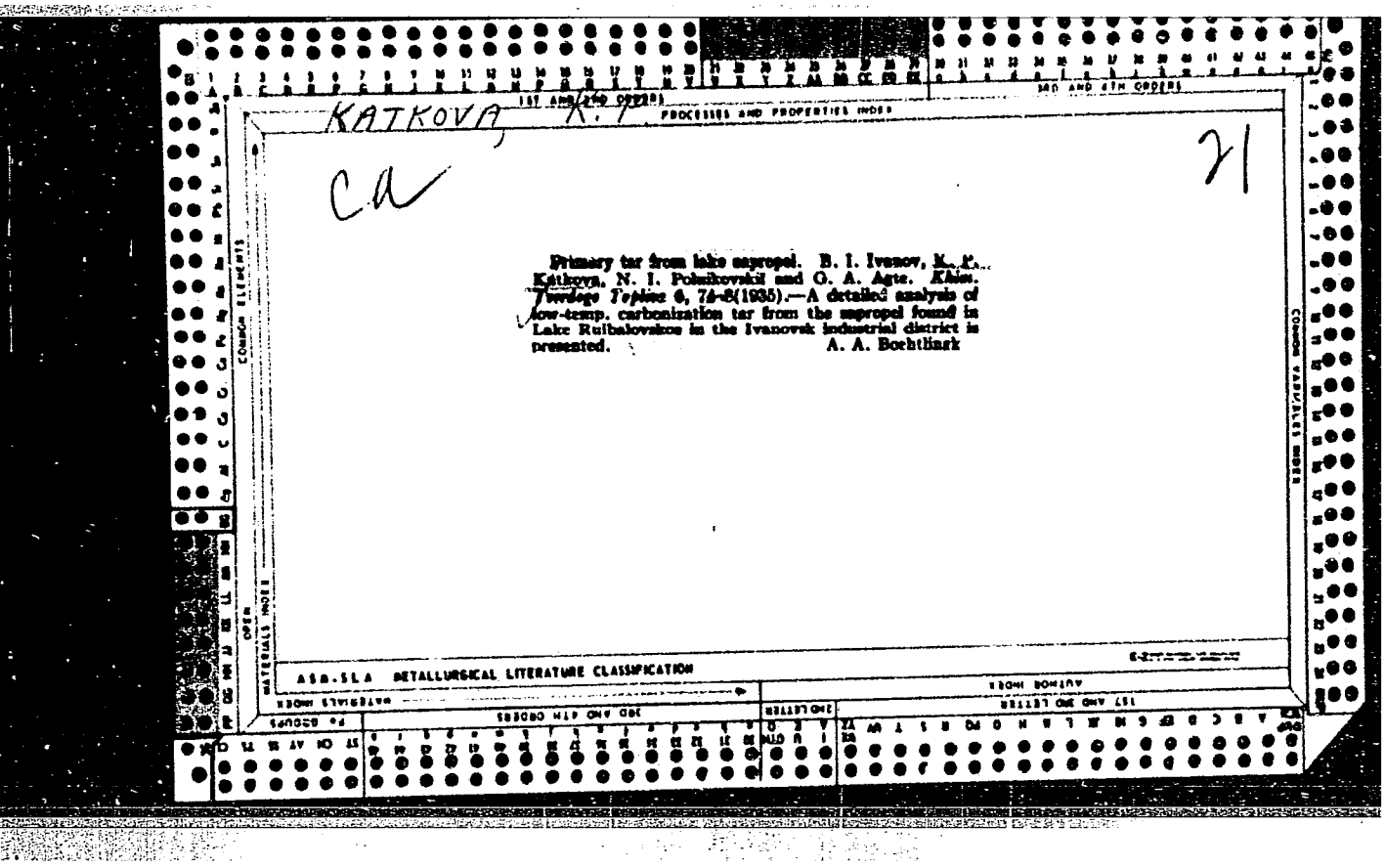
Ural'skoye soveshchaniye po spektroskopii. 3d, Sverdlovsk, 1960. Materialy (Materials of the Third Ural Conference on Spectroscopy) Sverdlovsk, Metallurgizdat, 1962. 197 p. Errata slip inserted. 3000 copies printed.

Sponsoring Agencies: Institut fiziki metallov Akademii nauk SSSR. Komissiya po spektroskopii; and Ural'skiy dom tekhniki VSNTO.

Eds. (Title page): G. P. Skornyakov, A. B. Shayevich, and S. G. Bogomolov; Ed.: Gennadiy Pavlovich Skornyakov; Ed. of Publishing House: M. L. Kryzhova; Tech. Ed.: N. T. Mal'kova.

PURPOSE: The book, a collection of articles, is intended for staff members of spectral analysis laboratories in industry and scientific research organizations, as well as for students of related disciplines and for technologists utilizing analytical results.

COVERAGE: The collection presents theoretical and practical problems of the application of atomic and molecular spectral analysis in controlling the chemical composition of various materials in ferrous and nonferrous metallurgy, geology, chemical industry, and medicine. The authors express their thanks to G. V. Chentsova for help in preparing the materials for the press. References follow the individual articles.



KATKOVA, K. I.

CA

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Primary tar from lake sapropel. B. I. Ivanov, K. I. Katkova, N. I. Polnikovskii and G. A. Agte. *Khim. Tverdogo Topliva* 6, 78-8(1935).—A detailed analysis of low-temp. carbonization tar from the sapropel found in Lake Ruibalovskoe in the Ivanovsk industrial district is presented. A. A. Boehtlingk

KATKOVA, K. P.

A. S. Broun, M. G. Voronkov, and K. P. Katkova - "Study of the reaction of sulphur with unsaturated compounds. V. Action of sulphur on aliphatic hydrocarbons with one double bond." (p. 726)

SC: Journal of General Chemistry, (Zhurnal Obshchei Khimii), 1950, Vol. 20, No. 4.

KATKOVA K. P.

Mechanism of formation of acetone and methyl propyl ketone from ethanol. B. A. Bolotov, B. N. Dolgov, and K. P. Katkova. *Zhur. Priklad. Khim.* 28, 414-21(1955); [illegible] U.S.S.R. 28, 391-7(1955)(Engl. translation); C.A. 50, 793f, 1578c.—In catalytic transformation of AcH, EtOAc and EtOH over activated Cu the 1st reaction is dehydrogenation of EtOH to AcH. Transformation of AcH and EtOH at 325-50° on the catalyst is predominant [illegible] formation of EtOAc from AcH [illegible]

[illegible]

treatment of EtOAc yields products [illegible]

KATKOVA, K. P.

AID P - 2781

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 9/19

Authors : Bolotov, B. A., B. N. Dolgov, and K. P. Katkova

Title : Mechanism of the formation of acetone and methyl propyl ketone from ethyl alcohol. Part III.

Periodical : Zhur. prikl. khim. 28, 4, 414-421, 1955

Abstract : Catalytic transformations of ethyl alcohol, acetaldehyde, and ethyl acetate in the presence of a copper catalyst were studied. The experiments were carried out at 200-375°C. Five tables, 5 diagrams, 5 references (4 Russian: 1939-1955).

Institution : None

Submitted : Jl 9, 1953

KATKOVA, K. P.

Catalytic transformation of primary alcohols into ketones. V. Catalytic transformation of amyl, hexyl and heptyl alcohols over an activated copper catalyst. B. A. Bolotov, B. N. Dolgov, and K. P. Katkova. *Zhur. Priklad. Khim.* 28, 1181-9(1955); cf. C.A. 49, 3995g.—AmOH, n-$C_6H_{13}OH$, and n-$C_7H_{15}OH$ passed over a Cu catalyst activated with ThO_2 at 250-75° yield up to 60% of esters, while at 325-50° are formed the corresponding sym. ketones in yields up to 44-55%. Generally, with increase of mol. wt. of the alc., the yields of esters and ketones show an increase, as is illustrated by graphical presentation of the results. The predominant content of CO in the off-gases indicates that the formation of the ketones may proceed through aldehydes and aldols. The presence of CO_2 and olefins in the off-gas indicates a partial decompn. of the esters and the ketones and partial conversion of CO

G. M. Kosolapoff

KATKOVA K.P.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721120006-2"

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SOV/80-33-2-29/52

AUTHORS: Bolotov, B. A., Dolgov, B. N., Katkova, K. P.

TITLE: Concerning the Mechanism of Formation of Ketones From Primary Alcohols. Communication X

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 2, pp 425-431 (USSR)

ABSTRACT: The study of V. O. Komarevsky and A. G. Schmiht (J. Am. Chem. Soc., 1944, Vol 66, p 1117) of the transformation of branched alcohols and aldehydes over Cr_2O_3 showed that ketones are formed when the α-carbon atom is not substituted; otherwise, the reaction gives only the corresponding aldehydes, in good yield. The above authors advanced an explanation, according to which α -substituted aldehydes cannot participate in an aldol condensation preceding the ketone formation. Contrary to the above, the authors of the present study found (This journal, 1957, Vol 30, pp 131 and 286) that branched alcohols were converted, over copper

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catalysts, into ketones at temperatures higher by 100° C than the conversion temperatures of normal alcohols. The above does not necessarily disprove the explanation of the ketone formation through the aldol condensation, advanced by the American authors. The present study describes the conversion of primary branched amyl alcohols substituted in α -position. A copper catalyst, activated with thorium oxide, and reduced with hydrogen at 275-300° C, was used in the experiments which were made at 275-525° C, at a molar ratio hydrogen: alcohol = 1:1, and a space velocity of 150-160. Under these conditions 2,2-dimethylpropan-1-ol at 275° C yielded 23% dimethylpropanal and 4% ester; at 350° C only dimethylpropanal was obtained, in 24% yield, and at 425° C, in 77% yield. The total yield of the reaction products was 56% at 275° C and only 32% at 350° C, due, evidently, to increased decomposition of the aldehyde. The ketone was absent at all temperatures.

Concerning the Mechanism of Formation of Ketones From Primary Alcohols. Communication X

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2-methylbutan-1-ol at 275° C yielded 11% of 2-methylbutanal and 43% isoamylvalerate; at 325-375° C the yield of the aldehyde increased up to 39% and that of the ester decreased to 15%; above 400° C the aldehyde was transformed into a symmetric ketone (3,5-dimethylheptan-4-one) in yields increasing with temperature (28% at 500° C). It was established that all alcohols fully substituted in α -position were converted, depending on the temperature, into either esters or ketones via the intermediate aldehyde. 2,2-dimethylpropan-1-ol was an exception; it yielded only the aldehyde. The presence of hydrogen at the α -carbon atom of the aldehyde determined the possibility of the ketone formation. The above confirmed the validity of the suggested aldol mechanism of ketone formation from primary alcohols, which can be expressed as follows:

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Concerning the Mechanism of Formation of Ketones From Primary Alcohols. Communication X

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$$2RCH(R')CH_2OH \xrightarrow{-2H_2} 2RCH(R')CHO \rightarrow [RCH(R')CHOHCR(R')CHO \xrightarrow{-CO,-H_2} \rightarrow RCH(R')COCH(R')R.$$

There are 5 tables; 2 figures; and 16 references, 4 U.S., 2 French, 1 German, 9 Soviet. The U.S. references are: V. I. Komarevsky, I. R. Coley, J. Am. Chem. Soc., 63,700, 3269 (1941); Advances in Catalysis and Related Subjects, VIII, 207 (1956); V. I. Komarevsky, A. G. Schmiht, J. Am. Chem. Soc., 66, 1117 (1944); E. Hunters, S. Mulliken, Identific. of Pure Organic Comp., N.Y., (1946).

SUBMITTED: June 5, 1959

Card 4/4

KALECHITS, I.V.; KATKOVA, L.M.; BLINOV, V.N.

Mechanism of the hydrogenation of benzene over a nickel catalyst.
Trudy Vost.-Sib.fil.AN SSSR no.3:94-98 '55. (MIRA 9:4)
(Benzene) (Hydrogenation)

KALECHITS, I.V.; KATKOVA, L.M.

Chemism of hydrocarbon degradation in destructive hydrogenation. Trudy Vost.-Sib.fil.AN SSSR. no.3:99-104 '55. (MLRA 9:4)
(Hydrocarbons) (Hydrogenation)

LAPPO, A.A.; KATKOVA, M.I., metodist; SEVAST'YANOVA, K.A.

Exhibitions and displays of special items. Inform.biul.VDNKH no.3: 28-31 Mr '64. (MIRA 17:3)

1. Glavnyy metodist pavil'ona "Tekhnicheskiye kul'tury" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Lappo).
2. Pavil'on "Khraneniye i pererabotka zerna" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Katkova).
3. Zaveduyushchaya oranzhereyey pavil'ona "TSvetovodstvo i ozeleneniye" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Sevast'yanova).

VARENITSA, Ye.T., doktor biolog. nauk; KATKOVA, M.M., kand. sel'skokhoz. nauk; VIL'NER, R.A., starshiy zootekhnik

Increasing the butterfat percentage of black-and-white cattle using hybrid bulls from the "Gorki Leninskiye" Farm. Agrobiologiia no.3:400-410 My-Je '65. (MIRA 18:11)

1. Nauchno-issledovatel'skiy institut sel'skogo khozyaystva tsentral'nykh rayonov nechernozemnoy zony.

KATKOVA, Mariye Mikhaylovna; TEPLYAKOVA, A.S., red.

[Practices of sheepbreeders of Kherson Province] Dosvid vivchariv Khersonshchyny. Kyiv, 1958. 23 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrains'koi RSR. Ser.3, no.20). (MIRA 12:2)

(Kherson Province--Sheep)

KATKOVA, M.O., metodist; KAZAKOV, V.M.

New exhibits. Inform. biul. VDNKH no.10:28-30 '63.
(MIRA 18:5)

1. Pavil'on "Khraneniye i pererabotka zerna" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Katkova).
2. Starshiy inzh.-metodist pavil'ona "Vodnoye khozyaystvo" na Vystavke dostizheniy narodnogo khozyaystva SSSR (for Kazakov).

FEDOROVSKIY, A.N., prof.; NESTERENKO, G.B., dotsent, KATKOVA, M.Ya., vrach; ORMAN, Ya.M., vrach; SHELYUZHENKO, A.A., vrach

Use of bicillin in the treatment of syphilis. Vest.derm.i ven. no.9:61-62 '61. (MIRA 15:5)

1. Iz kliniki kozhnykh i venericheskikh bolezney Dnepropetrovskogo meditsinskogo instituta i oblastnogo kozhno-venerologicheskogo dispansera.

(SYPHILIS) (BICILLIN)

YASTREBOV, Yevgeniy Veniaminovich; KATKOVA, N., red.

[Along the Chusovaya River; tourist guide] Po reke Chusovoi; putevoditel' turista. Sverdlovsk, Sverdlovskoe knizhnoe izd-vo, 1963. 184 p. (MIRA 17:4)

SAPRYKIN, Viktor Maksimovich; KATKOVA, N., red.; PAL'MINA, N., tekhn. red.

[If one is interested in pursuing a profession....] Esli khochesh imet' professiiu.... Sverdlovsk, Sverdlovskoe knizhnoe izd-vo, 1962. 143 p. (MIRA 16:5)
(Electric engineering)

VAKAR, [illegible] KATKOVA, N., red.

[Guide to the plants of the Urals] Opredelitel' rastenii Urala. Sverdlovsk, Sverdlovskoe knizhnoe izd-vo, 1961. 402 p. (MIRA 18:5)

BABAKOV, Grigoriy Alekseyevich; KATKOVA, N., red.; SAKNYN', Yu., tekhn. red.

[In the land of cedar and sable]V kraiu kedra i sobolia. Sverdlovsk, Sverdlovskoe knizhnoe izd-vo, 1961. 62 p. (MIRA 15:8)
(Pelym Valley--Zoology) (Pelym Valley--Botany)

KATKOVA, N.P.

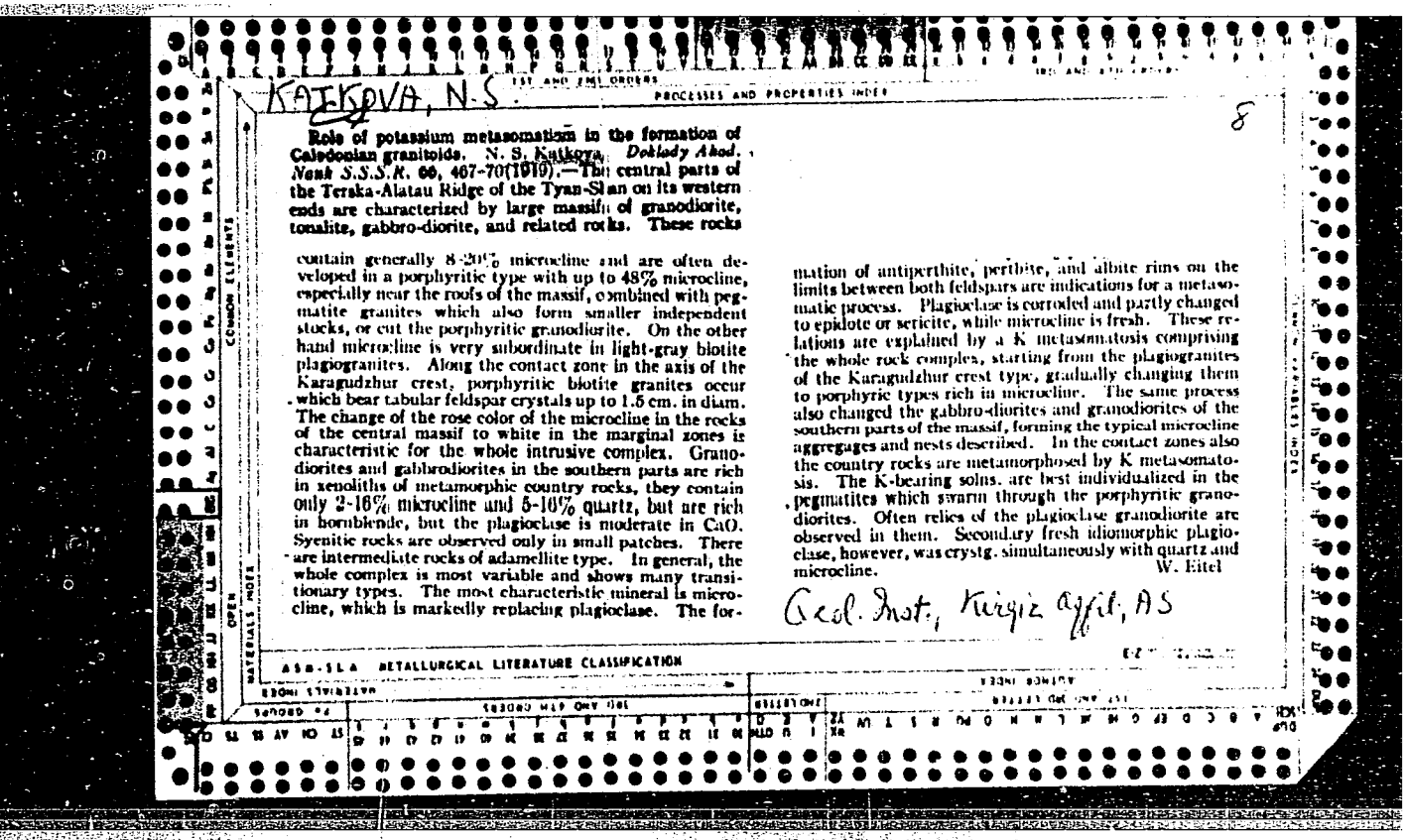
Methods of effective treatment of chronic inflammatory diseases of the female generative organs with therapeutic factors. Trudy KGMI no.10:71-73 '63. (MIRA 18:1)

1. Iz kurorta "Kashin" Kalininskoy oblasti (glavnyy vrach Ya.I. Zatsepin). Nauchnyy rukovoditel' raboty - prof. I.F.Pantsevich.

KATKOVA, N. S. Cand. Geolog-Mineral Sci.

Dissertation: "Lithology and Metamorphism of Sedimentary Rocks of the Lena River Gold-Bearing Region." Moscow Geological Prospecting Inst. imeni S. Ordzhonikidze, 19 Feb 47.

SO: Vechernyaya Moskva, Feb, 1947 (Project #17836)



KATKOVA, N.S.

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Role of potassium metasomatism in the formation of Caledonian granitoids. N. S. Katkova. *Doklady Akad. Nauk S.S.S.R.* 66, 467-70(1949).—The central parts of the Teraka-Alatau Ridge of the Tyan-Shan on its western ends are characterized by large massifs of granodiorite, tonalite, gabbro-diorite, and related rocks. These rocks contain generally 8-20% microcline and are often developed in a porphyritic type with up to 48% microcline, especially near the roofs of the massif, combined with pegmatite granites which also form smaller independent stocks, or cut the porphyritic granodiorite. On the other hand microcline is very subordinate in light-gray biotite plagiogranites. Along the contact zone in the axis of the Karagudzhur crest, porphyritic biotite granites occur which bear tabular feldspar crystals up to 1.5 cm. in diam. The change of the rose color of the microcline in the rocks of the central massif to white in the marginal zones is characteristic for the whole intrusive complex. Granodiorites and gabbrodiorites in the southern parts are rich in xenoliths of metamorphic country rocks, they contain only 2-16% microcline and 5-10% quartz, but are rich in hornblende, but the plagioclase is moderate in CaO. Syenitic rocks are observed only in small patches. There are intermediate rocks of adamellite type. In general, the whole complex is most variable and shows many transitionary types. The most characteristic mineral is microcline, which is markedly replacing plagioclase. The formation of antiperthite, perthite, and albite rims on the limits between both feldspars are indications for a metasomatic process. Plagioclase is corroded and partly changed to epidote or sericite, while microcline is fresh. These relations are explained by a K metasomatosis comprising the whole rock complex, starting from the plagiogranites of the Karagudzhur crest type, gradually changing them to porphyric types rich in microcline. The same process also changed the gabbro-diorites and granodiorites of the southern parts of the massif, forming the typical microcline aggregages and nests described. In the contact zones also the country rocks are metamorphosed by K metasomatosis. The K-bearing solns. are best individualized in the pegmatites which swarm through the porphyritic granodiorites. Often relics of the plagioclase granodiorite are observed in them. Secondary fresh idiomorphic plagioclase, however, was crystg. simultaneously with quartz and microcline. W. Eitel

Geol. Inst., Kirgiz Affil., AS

KULIYEV, R.Sh.; SHAKHNOVICH, M.I.; SAMEDOVA, F.I.; MUSAYEV, G.T.; CHIKAREVA, N.I.; Prinimali uchastiye: ALIYEVA, A.; ALIYEVA, V.; KATKOVA, O.; BESSONOVA, Ye.; KURILINA, A.

Improving the quality of transformer oil from Buzovna crude oil. Khim. i tekh. topl. i masel 8 no.10:16-22 O '63. (MIRA 16:11)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

KATKOVA, R.V.

LUKOMSKIY, Ya.I., professor, doktor ekonomicheskikh nauk; LEBEDEVA, N.K., kandidat tekhnicheskikh nauk; KATKOVA, R.V., inzhener.

Statistical methods used in the investigation of steel. Standartizatsiia no.1:19-27 Ja-F '54. (MLRA 7:2)
(Steel--Tables, calculations, etc.)

LUKOMSKIY, Ya.I., professor doktor ekonomicheskikh nauk; LEBEDEVA, N.K., kandidat tekhnicheskikh nauk; KATKOVA, R.V., inzhener.

Application of statistical methods in testing steel. Standartizatsiia no.2:47-51 Mr-Ap '54. (MLRA 7:6)
(Steel--Testing)

KATKOVA, S.A., inzh.

Thrust of ice on the upper slope of an earth dam. Gidr. stroi. 31 no.7:35-36 Jl '61. (MIRA 14:7)
(Tsimlyansk Hydroelectric Power Station--Dams)
(Ice on rivers, lakes, etc.)

KRUTIKOV, K.T., inzh.; GARINOV, K.A., kand. tekhn. nauk; ITTENBERG, I.A., kand. tekhn. nauk; prinimali uchastiye: VAKHTUROV, A.N., starshiy nauchnyy sotrudnik; VOLKOV, M.V., starshiy nauchnyy sotrudnik; KURTSMAN, L.B., starshiy nauchnyy sotrudnik; BOGATYREVA, M.I., mladshiy nauchnyy sotrudnik; ZABOLOTNEVA, G.K., mladshiy nauchnyy sotrudnik; NOVIKOVA, V.V., mladshiy nauchnyy sotrudnik; ALEKSEYEVA, T.I., mladshiy nauchnyy sotrudnik: PETROVA, I.A., mladshiy nauchnyy sotrudnik; SEDEL'NIKOVA, A.F., mladshiy nauchnyy sotrudnik; KATKOVA, T.I., inzh.; ZELENKOV, P.A., inzh.; SIDOROVA, L.N., starshiy laborant; KALASHNIKOVA, V.M., starshiy laborant; VOYEVODINA, A.Ye., starshiy tekhnik; USPENSKAYA, M.B., starshiy tekhnik; YEPIFANOV, V.K., starshiy tekhnik

[Organization of the shipping of transit cargoes on the Volga-Baltic Sea Waterway.] Organizatsiia perevozok tranzitnykh gruzov po Volgo-Baltiiskomu vodnomu puti. Moskva, Transport, 1965. 109 p. (Moscow. TSentral'nyi nauchno-issledovatel'skii institut ekonomiki i ekspluatatsii vodnogo transporta. Trudy, no.40).

ACCESSION NR: AT4016996 S/3057/63/000/000/0080/0092

AUTHOR: Struminskiy, G. V.; Ignatova, T. A.; Katkova, T. N.; Zelenov, A. S.; Ivanova, T. G.

TITLE: Glue PED-B for gluing formula 57-40 masticated rubber to the surfaces of building structures

SOURCE: Zashchitny*ye pokry*tiya v atomnoy tekhnike (Shielding in nuclear engineering); sbornik statey. Moscow, Gosatomizdat, 1963, 80-92

TOPIC TAGS: glue PED-B, 57-40 masticated rubber, masticated rubber, radioactive contamination, radioactive shielding, nuclear shielding, glue

ABSTRACT: The authors discuss the shortcomings of certain of the glues thus far used for fastening the polyvinylchloride masticated rubber shielding (formula 57-40) which is presently in wide use as a protection against radioactive contamination. Experimental work has shown that glue compositions on a perchlorvinyl resin base with a small admixture of epoxide resin ED-5 have good adhesion to formula 57-40 polyvinylchloride masticated rubbers. The introduction into the composition of epoxide resin hardeners leads to the formation of a three-dimensional structure during the hardening process of

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the glue, resulting in a considerable increase in the strength of the bond in comparison with perchlorvinyl glues. The authors enumerate the most important general requirements of a glue for these purposes: necessary strength and service life of the glue bond, viability of the glue and non-inflammability during the working process, and others. The special requirements were the following: 1) The glue must not impair the desorption properties of the shielding with respect to radioactive contamination; 2) The surface of glued lap bonds of glued materials must not accumulate radioactive contaminants and must be capable of being washed free of them no worse than the covering material; 3) The glued bond must possess sufficient resistance to radiation. An experimental evaluation was made of certain general and special properties of type PED-B glue. Among the parameters considered were the mechanical properties (with description of the test equipment employed) and the sorption-desorption properties of the glue with respect to radioactive isotopes, as well as its ability to withstand radiation. A description of the technological process to be followed in fastening formula 57-40 masticated rubber shielding with PED-B glue is also given. It was found that this glue, which is manufactured on an incombustible methylene chloride solvent has good adhesion characteristics not only to the masticated rubber, but also to cement, metals, wood and other construction materials. It is not dangerous from the

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ACCESSION NR: AT4016996

point of view of explosions. While the residual radioactivity accumulated by glued bonds was found to be very high (up to 60%), it was found that by lacquering the bonds with high-deactivating lacquers (VKHL-4000, KHSL) this residual activity could be reduced to a level close to the value of this parameter for the basic shielding material. The authors also determined that the bonds preserve the required strength under the effect of a dose of gamma-radiation to 100 Mrads. Orig. art. has: 3 tables and 6 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 20Feb64 ENCL: 00

SUB CODE: NP, MT NO REF SOV: 002 OTHER: 000

Card 3/3

KATKOVA, Ye.D.

Spore-pollen complexes in Mesozoic sediments in the Or' Valley.
Izv.vys.ucheb.zav.;geol.i razv. 4 no.7:65-67 Jl '61.
(MIRA 14:8)

1. Saratovskiy gosudarstvennyy universitet.
(Or' Valley--Polynology)

KATKOVNIK, V.Ya (Leningrad); PERVOZVANSKIY, A.A. (Leningrad)

Self-oscillatory operation of a relay system with disturbance by random signals. Avtom. i telem. 22 no.5:599-604 My '61. (MIRA 14:6)

(Automatic control)

32247

16.8000 (1103, 1031, 1132)

S/103/61/022/012/004/016
D201/D305

AUTHORS: Katkovnik, V. Ya. and Pervozvanskiy, A. A. (Leningrad)

TITLE: The dynamics of a self-oscillating relay system of extremum regulation

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 12, 1961, 1576-1584

TEXT: The authors show that by making certain assumptions the problem of noise affecting the operation of an optimum regulation relay system may be dealt with on the basis of normal dynamic analysis as used for determining the frequency and amplitude of oscillations in the absence of noise. The analysis is made for the case of a system represented by the block diagram in Fig. 1, whose motion is described by

$$x = \frac{1}{p} K_1(p)\eta, \qquad y = f(x + \xi_1)$$

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$$\xi = pK_2(p)y, \qquad \eta = F(\xi + \zeta_2) \qquad (1)$$

where ζ_1 - ζ_2 - the external disturbances referred to the input of the object to be controlled and to the input of the non-linear controller with characteristics shown in Fig. 1(b). If the noise acts at the output only and may, therefore, be referred to the input of the controller by linear transformation, two methods of simplified solution are given. 1) The changes in the disturbance ζ_2 and the corresponding level fluctuants $\varkappa$ are slow and if $\zeta_2 \ll |A$, then the method of A. A. Pervozvanskiy (Ref. 5: Izv. AN SSSR, OTN, Mekhanika i mashinostroyeniye, no. 1, 1959) should be applied, from which the r.m.s. values of $\Delta\omega$, ΔT and ΔA are related to the r.m.s. value of disturbance by elementary relationships

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$$\sigma_\omega^2 = \left(\frac{\partial \omega}{\partial x}\right)^2_{x=x_0} \sigma_2^2, \quad \sigma_T^2 = \left(\frac{\partial T}{\partial x}\right)^2_{x=x_0} \sigma_2^2,$$

$$\sigma_A^2 = \left(\frac{\partial A}{\partial x}\right)^2_{x=x_0} \sigma_2^2 \qquad (5)$$

In a more complex case, when the disturbance acts at the input of the object to be controlled $\zeta_1 \neq 0$, $\zeta_2 = 0$ two cases are considered: A. $\zeta(t)$ may be approximated by a function, whose drift is random, slow and remains constant over the oscillation period. In this case, the fluctuations of the oscillation parameters may be determined from the results obtained in calculating the system state for a constant drift velocity, with an appropriate loss of the oscillation symmetry. B. A system for which the duration of transients in linear parts of the system is much smaller than the half period,

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i.e. $-\lambda_i T \gg 1$, where λ_i - roots of denominators of $K_1(p)$, $K_2(p)$. In this case the r.m.s. value ζ_{2r} as referred to the input may be evaluated from

$$\sigma_2^2 = 4k^2\sigma_1^2 \int_0^T \int_0^T W_2(T - \tau_1)W_2(T - \tau_2)x(\tau_1)x(\tau_2)\varphi(\tau_1 - \tau_2)d\tau_1 d\tau_2 \qquad (20)$$

in which $\sigma_1^2 \varphi_1(\tau)$ - the correlation function of the process $\zeta_1(t)$ and the r.m.s. values of parameter fluctuations determined as before from formulae (5). The permanent deviation of the system from its extremum is determined by considering an arrangement of a two-position relay connected in series with a differentiating network and a trigger. The approximate evaluation of the probability of the system deviating from the extremum may be made under the following assumption: a) The disturbance, as referred to the controller, has

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a pulse character and a negligible time correlation compared with the free oscillation period; b) the disturbance has a normal distribution and a small r.m.s. value. These assumptions make it possible to utilize the known results which give the average number of crossings of the constant level by a stationary disturbance, having a normal probability density and the system may be characterized by the quantity $1/N_{av}$ which is the average time of operation of the system up to the first error and of its deviation from the extremum. The basic relationships between the r.m.s. values of self-oscillation frequency fluctuations have been checked experimentally on the electronic computer ЭМУ-6 (EMU-6), using a noise generator as the random disturbance source, with the correlation coefficient approximated by $\varphi(\tau) = e^{-4,2|\tau|}$. The results obtained proved the methods described to be quite accurate at small disturbance levels and not too critical with respect to the required damping conditions. There are 4 figures, 2 tables and 8 Soviet-bloc references.

SUBMITTED: April 25, 1961

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S/280/63/000/001/005/016
E140/E435

AUTHORS: Katkovnik, V.Ya., Poluektov, R.A., Chelpanov, I.B. (Leningrad)

TITLE: The synthesis of multichannel discrete (sampled data) systems in the presence of random noise

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Tekhnicheskaya kibernetika. no.1, 1963, 59-70

TEXT: The synthesis of multichannel discrete filters is undertaken in the presence of correlation between the input signals. The method ensures minimum dispersion of the sampling error. It is shown that the solution obtained is unique. The system is assumed to have infinite memory, and in this case the use of the z-transform yields the solution in closed form. There is 1 figure.

SUBMITTED: July 13, 1962

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